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IN THE CLAIMS

- 1 1. (currently amended) An optical assembly comprising:
2 a substrate;
3 a light emitting device mounted over a major surface of the substrate and having a
4 face;
5 at least one channel formed in the substrate near the face of the light emitting
6 device; and
7 at least one photodetector optically coupled to the light emitted from the face, the
8 channel including at least one surface spaced from the face positioned to receive only a
9 portion of the face light and oriented at an angle to the face to reflect it-said portion away
10 from the photodetector so that the photodetector receives primarily direct light from the
11 face.
- 1 2. (original) The assembly according to claim 1 wherein the substrate comprises
2 silicon.
- 1 3. (original) The assembly according to claim 1 wherein the light emitting device
2 comprises a semiconductor laser.
- 1 4. (original) The assembly according to claim 1 wherein the channel comprises at
2 least one V- groove formed in the substrate.
- 1 5. (original) The assembly according to claim 4 wherein the V-groove has a vertex
2 which is essentially parallel to the face.
- 1 6. (original) The assembly according to claim 5 wherein the V -groove has a sloped
2 wall facing the face which makes an angle within the range 10 to 75 degrees with the
3 face.
- 1 7. (original) The assembly according to claim 4 wherein the substrate is silicon and
2 the V -groove has surfaces in the <111> crystallographic plane.
- 1 8. (original) The assembly according to claim 4 wherein the channels comprise at
2 least two V- grooves.
- 1 9. (original) The assembly according to claim 1 wherein the face is the back face of
2 the device.
- 1 10. (currently amended) An optical assembly comprising:

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2 a substrate comprising silicon;
3 a semiconductor laser mounted over a major surface of the substrate and having a
4 back face;
5 at least one V- groove formed in the substrate near the back face of the laser, the
6 groove including surfaces formed in the $\langle 111 \rangle$ crystallographic plane of the substrate; and
7 an array of photodetectors optically coupled to light from the back face of the laser,
8 at least one of the surfaces of the V -groove spaced from the back face and
9 positioned to receive only a portion of the light from the backface and oriented at an
10 angle to the back face to reflect it-awaysaid portion away from the photodetectors so that
11 the photodetectors receive only direct light from the back face.

1 11. (currently amended) An optical transmitter comprising an optical assembly, an
2 optical filter optically coupled to the assembly, at least one photodetector optically
3 coupled to the filter, and control circuitry electrically coupled to the photodetector, the
4 assembly comprising:

5 a substrate;
6 a light emitting device mounted over a major surface of the substrate and having a
7 face;
8 at least one channel formed in the substrate near the face of the light emitting
9 device, the photodetector being optically coupled to the light emitted from the face, and
10 the channel including at least one surface spaced from the face and positioned to receive
11 only a portion of the face light and oriented at an angle to the face to reflect it-said
12 portion away from the photodetector so that the photodetector receives primarily direct
13 light from the face.

1 12. (currently amended) An optical network comprising a transmitter, an optical
2 fiber optically coupled to the transmitter, and a receiver optically coupled to the fiber, the
3 transmitter comprising an optical assembly comprising:

4 a substrate;
5 a light emitting device mounted over a major surface of the substrate and having a
6 face;
7 at least one channel formed in the substrate near the face of the light emitting
8 device; and

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9 at least one photodetector optically coupled to the light emitted from the face, the
10 channel including at least one surface spaced from the face and positioned to receive only
11 a portion of the face light and oriented at an angle to the face to reflect it-said portion
12 away from the photodetector so that the photodetector receives primarily direct light from
13 the back face.

1 13. (currently amended) A method of forming an optical assembly comprising the
2 steps of:

3 mounting a light emitting device having a face over a major surface of a substrate;
4 mounting a photodetector so as to receive light emitted from the face; and
5 forming a channel in the substrate in close proximity to the face, the channel
6 including at least one surface spaced from the face and positioned to receive only a
7 portion of the light from the face and oriented at an angle to the face to reflect it-said
8 portion away from the photodetector so that the photodetector receives primarily direct
9 light from the face.

1 14. (original) The method according to claim 13 wherein the channel is formed by
2 etching the major surface of the substrate.

1 15. (original) The method according to claim 14 where the etching forms at least
2 one V -groove in the channel.

1 16. (original) The method according to claim 15 wherein the substrate is silicon,
2 and the V -groove has walls in the <111> crystallographic plane of the substrate.